Surgeon General's Media Update
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The National Naval Medical Center's Pharmacy kicked off it's new "Brown Bag Medication Check-Up" program this month to help patients manage their medications.

The program runs in conjunction with American Pharmacists' Month and will last through October.

LT Sara Lund, a pharmacist at the hospital, said the medication check-up program will educate patients on their prescribed medications.

"Part of our jobs as pharmacists is to make sure the patients are actually taking the medications they are on," Lund said. "By educating them, we are showing them why their medication is so important and showing them that they have the tools to be healthy."

American Heart Association reports 32 million Americans are taking three or more medications per day. Nearly 29 percent of Americans stop taking their medicine before their prescription is finished.

Although the pharmacy is specifically advertising the brown bag program this month, Pharmacy Department Head CDR Eugene de Lara said pharmacists are always willing to meet with patients.

"[Although] we are very busy, [patients] are always welcome to ask for specific counseling in private areas and they should not feel inhibited because of the high volume of business," de Lara said. "We are always available to help patients."

"The pharmacists have always been very polite and given me handouts about my medications and how to take them," said Phyllis Cole, the wife of a retiree. "We're very pleased with the health care we receive when we come to [National Naval Medical Center.]"

Bethesda's pharmacy sees upwards of 800 patients and fills approximately 2,200 prescriptions each day, de Lara said. To get that job done, pharmacists rely on technicians to play a crucial role in distribution and patient care, he said.

"While this is called American Pharmacists' month ... in the Defense Department, technicians are also an important part of the service we provide for our patients," de Lara said. "While it says 'pharmacists' month, we fully understand and appreciate the contributions our technicians are providing as well."

"If we can make a difference in one patient's health," Lund said, "this whole project will be worth it."

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WASHINGTON, – The U.S. military's health care community is transforming its approach to capturing, archiving and accessing servicemembers' medical records, a senior Defense Department official said here yesterday.

"We are working to bring about some pretty amazing things in the way we're changing and revolutionizing the delivery of health care through technology. and specifically through information technology," Dr. William Winkenwerder, assistant secretary of defense for health

affairs, told an audience at a military health care exhibit.

He said private industry has contributed to the development of DoD's electronic medical record keeping and health care information system. "We recognize that many of you have contributed in many different ways to the incredible capabilities that are before you and that are put forth for making this wonderful new system we call AHLTA," he said.

AHLTA -- an acronym for the lengthy name "Armed Forces Health Longitudinal Technology Application" -- is a global, 24/7, secure and advanced electronic system of digitized medical records and information. "It is a system that supports the very unique missions of the United States armed forces," he said. "Current, accurate and available patient information is an essential component in providing quality health care."

In August, President Bush signed an executive order to promote federally led efforts to implement more transparent and high-quality health care. The executive order promotes quality and efficient health care for federal government-administered health care programs, including DoD's TRICARE. "The executive order offered dynamic direction and real change in culture and the practice of health care in our country," Winkenwerder said.

The executive order's goal is to propel the business of health care and the practice of medicine into the Information Age, he said. This will allow health care information to become more transparent, so Americans and military personnel can make informed decisions about where to seek health care, he said.

One of these "transparencies" is in health care costs. DoD set up a Web site that specifically outlines military health care costs in order to help beneficiaries understand what TRICARE pays for medical procedures, visits and hospitalization.

DoD also holds health care summits and forums in which health care professionals come together to discuss ways to improve the military medical system.

AHLTA will soon be fully deployed to military facilities throughout the world. "This will allow our beneficiaries' health records to be accessed worldwide at any military treatment facility in which our patients receive care," he said.

The AHTLA system now holds 8.6 million clinical records out of its total of 9.2 million beneficiaries, he said.

Winkenwerder said AHLTA uses highly scalable and mobile software that can be linked to hand-held wireless devices. One of these wireless systems is the "Battlefield Medical Information System Tactical."

BMIST generates electronic health records at the point of care. The hand-held wireless device enables military medical professionals to record, store, retrieve and transmit essential information from point of injury to health care facilities. Information can be entered onto electronic dog tags so medical folks at the next level of care have all the appropriate treatment information. This information then becomes a permanent part of the patient's electronic health record.

DoD has about 30,000 hand-held BMIST devices in use worldwide, including many in Iraq and Afghanistan.

Other information technology initiatives that are improving troop care are the ESSENCE -- "Electronic Surveillance System for Early Notification of Community-based Epidemics" -- system and the "Military Health System Population Health Portal."

ESSENCE, a Web-based medical surveillance application that analyzes DoD health care data worldwide for rapid or unusual increases in the occurrence of symptoms such as respiratory infection. ESSENCE enables DoD to better control and provide more timely care for those already infected.

Samuel Sturlson, project controller for ESSENCE, said the system provides epidemiologists and military health care providers with information about potential outbreaks of diseases or biological incidents. "Users are able to determine if there was a real outbreak at that local level or if it was a false positive," he said.

The Military Health System Population Health Portal is a centralized, secure, Web-based population health-management system used by military health care providers to alert them to their patients who may need clinical preventive services, like immunization or mammograms, and assists with disease management for condition like diabetes or asthma.

DoD also works closely with Department of Veterans Affairs health care providers to come up with better methods of sharing important military medical information electronically, he said.

"Our goal ultimately is to involve our patients more deeply in managing their health care. We believe that those patient-provider partnerships serve to enhance the quality of health care," Winkenwerder said. "Our nation's heroes certainly deserve our very, very best."

Residents Serve as Hospital's 'First Line' of Support to Beneficiary Care
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This is part eight of an ongoing monthly series that takes an in-depth look at National Naval Medical Center's Family Centered Care.

In today's world, the person who makes the big catch, saves a life or foils a robbery is often given credit for achieving the feat on his own. These "superstars" generally get accolades as being the sole reason for the achievement. However, the final result is usually the culmination of work by a dedicated support team.

At the National Naval Medical Center, medical residents are typically viewed as the dedicated support team that helps the hospital deliver world class care.

"The residents are directly involved in taking care of our beneficiaries," said CDR Patricia McKay, orthopedic resident program director. "They provide first line, hands-on interaction with our patients. They take care of them in the clinics, the wards, the operating room ... always under the direct supervision and oversight of a staff member."

Second-year internal medicine resident LT David Byers said residents meet with patients to understand their goals and expectations in the recovery process. He said they can answer most questions patients may have, but they also have senior military doctors standing by to ensure thoroughness.

“It is the responsibility of the residents and interns to take care of acute issues, ensure studies and procedures are done in a timely fashion and that individual patient needs are attended to,” Byers said. “Residents are the people that are always in the hospital so an attending [doesn’t have] to be here ... all night long.”

LT Carlos Kennedy, a second-year orthopedic surgery resident, said the National Naval Medical Center is the ideal facility to learn medicine. He said Bethesda is focused on health care, but it’s also a teaching hospital.

“[Residents are] involved in aspects of caring [for] all the patients, both inpatients and outpatients,” Kennedy said. “From start to finish, we’re usually involved with managing patients in conjunction with the staff. It’s 100 percent involvement in patient care.”

Third-year surgery resident LT Joanne Johnston said residents are most often the front line of patient care.

“As [surgery] residents, we evaluate patients in the clinic, in the emergency room and coming in from overseas via [medical evacuations],” Johnston said. “We formulate a plan for working up a problem [such as] ... anemia, pain, weight loss or ... abdominal injuries from [improvised explosive device] blasts.”

Kennedy said his day typically starts at 5 a.m. on the wards where he conducts inpatient rounds and checks on orthopedic patients. Kennedy said he looks at patient records, conducts wound checks on post-operative patients, schedules appropriate physical therapy and discusses patient discharge plans among other duties.

After completing rounds, orthopedic residents attend morning report with attending physicians to review emergency room cases from the night before and to discuss surgical cases.

“We review post-operative cases and talk about techniques and how diagnoses [were] made,” Kennedy said. “We talk about it in an academic setting ... the daily constant training is pretty rigorous.”

The orthopedic residency program also conducts specialized academic training once a week in addition to morning report, Kennedy said. Specialists come in to do lectures on different topics. On specialized training days, orthopedic residents from both Walter Reed Army Medical Center and Bethesda attend the training.

“The program is just starting to mesh ... on an academic basis, we come together because everybody can benefit from that academic environment,” Kennedy said. “We go over to Walter Reed for academic days and sometimes we’ll swap and they’ll come up here.”

With the impending integration, McKay said a major goal of the orthopedic residency program is to have a seamless transition into an integrated residency. She said the hospital has other integrated residencies programs to emulate including radiology and pediatrics.

“We’ve already started to share academics and residents rotate at each hospital,” McKay said. “Now we’re looking at the bigger picture trying to formally integrate the programs which requires approval from Navy and Army medical leadership and the civilian accrediting agency, the Accreditation Council for Graduate Medical Education.”

The National Naval Medical Center supports 77 National Capital Consortium residency and fellowship programs and five Navy specific residency programs. Bethesda is also the home to

seven internship programs and 10 fellowship programs for follow-on training in specific fields of medicine, including neonatal-perinatal medicine and radiation oncology.

Residents are split into teams after their morning report to experience each aspect of the field. Residents rotate every few months “to get exposure to different fields in orthopedics to start learning basic differentials and work up into management and operative techniques for those different areas,” Kennedy said.

Graduate Medical Education Administrator Bill Robinson said a residency is postgraduate medical training that leads to eligibility for board certification in a primary care or referral specialty.

“All residents have their medical degrees, so they are doctors,” Robinson said. “A residency usually follows the internship year or includes the internship year as the first year of residency ... Bethesda considers all first-year residents as interns.”

Medical schools give doctors a broad range of medical knowledge, basic clinical skills and limited experience practicing medicine. Medical residency gives in-depth training within a specific branch of medicine.

Robinson said the residents collectively are the house staff of the hospital. Most primary care residencies are three years, however, residencies in specialized fields could be more than seven years.

Like in most training environments McKay said residents are generally divided into three categories — interns, junior and senior residents. Depending on the number of years a specialty requires, Kennedy said a junior resident is in the second or third year of residency. A senior resident is in their fourth or fifth year of residency. During the fifth and final year a resident is often referred to as a chief resident.

“The residents train each other. One of their responsibilities, as they move through each year group, is to teach those coming along behind them,” McKay said. The chief resident has tremendous responsibility for the educational program of the junior residents, interns and medical students, she said.

McKay said military residents have to meet the same standards as civilians — the Accreditation Council for Graduate Medical Education. She said service members still can’t be deployed in the middle of their training and they can’t be expected to work more hours than civilians would.

McKay said statistics show military residents generally score higher and have far better pass rates on board exams.

One major difference Robinson noted in Navy and civilian residency training is the requirement to perform a general medical officer tour of duty. These tours are typically taken after the internship. Kennedy served a two-year general medical officer tour with Marines and spent time in Fallujah, Iraq.

McKay said the general medical officer tour gives residents more self-confidence and self-awareness of what it feels like to be a medical doctor.

Kennedy said the civilian and military training organizational structure is very similar.

“Junior residents on the outside do the same things as we do here,” he said. The big difference, Kennedy said, lies in the type of care the military provides.

“Civilians are not dealing with war-wounded casualties,” Kennedy said. “That’s a unique aspect of being here is managing the care of our wounded. It can be quite different than localized community trauma. Treating war-wounded tends to be isolated to the military community.”

Not all residents are required to perform general medical officer tours. Because of her previous experiences, Johnston was able to “go straight through” medical school.

Byers said his responsibilities vary monthly as internal medicine residents rotate through larger departments of medicine including the emergency room, cardiology, and hematology and oncology. He said they also rotate on subspecialty services such as infectious disease and rheumatology. In each case, Byers said tending to patient’s needs is his greatest reward.

“Most importantly ... is taking all of these responsibilities and learning something from them,” Byers said, “so that when we do finish our time here as residents, we will be able to take better care of our Sailors and Marines, because that is really what we’re here to do.”

Stem Cell Transplant Shows Promise Against ALS
10/16/06 – Forbes

New stem cell research in rats may lead to treatments that slow amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease.

Grafting human stem cells into the lower spine of rats bred to duplicate the neurological illness delayed the start of nerve cell damage associated with the disease and slightly prolonged the life of the rats, say scientists at Johns Hopkins University, Baltimore.

The stem cells developed into nerve cells and created extensive connections with existing nerve cells in the rats' spines. The transplanted stem cells did not succumb to ALS, the Hopkins team found. The study was published in this week's issue of the journal *Transplantation*.

"We were extremely surprised to see that the grafted stem cells were not negatively affected by the degenerating cells around them, as many feared introducing healthy cells into a diseased environment would only kill them," researcher Dr. Vassilis Koliatsos, associate professor of pathology and neurosciences, said in a prepared statement.

All the rats in this study did eventually die of ALS. However, the results provide "proof of principle" for stem-cell grafts, Koliatsos said.

In the next phase of this research, his team plans to graft stem cells along the full length of the rats' spines to study the effect of the intervention on nerves and muscles in the rodents' upper body.

In the current study, Koliatsos and his colleagues, "only injected cells in the lower spine, affecting only the nerves and muscles below the waist. The nerves and muscles above the waist, especially those in the chest responsible for breathing, were not helped by these transplanted stem cells."

Much more research needs to be done before there's any possibility of using this technique in humans, Koliatsos added.

Technique May Help Revive Head-Injury Victims
Doctors Report Unprecedented Success in Restoring Some Abilities in Semiconscious Patient
10/16/06 - By Rob Stein, Washington Post

Doctors yesterday reported the first evidence that targeted electrical brain stimulation may help head-trauma victims stuck in a state of semiconsciousness, after an experiment apparently restored some of one patient's abilities to function and communicate.

Although the technique has been tried on only one patient, the experiment marks an unprecedented step that could lead to a new way to try to coax thousands of patients mired in similar states back toward more awareness, enabling them to function more and interact better with their families and others.

"It sounds promising," said James L. Bernat, a neurologist at Dartmouth Medical School who was not involved in the research. "If it turns out to be helpful for other patients, then it certainly would be an important therapy."

Thousands of Americans are left unconscious or semiconscious by brain damage. Many go into a coma, in which they are alive but completely unconscious. Some eventually emerge into a vegetative state, in which their eyes open and close but they show no signs of conscious awareness or ability to interact with their environment. The most famous recent example of this was Terri Schiavo, whose case triggered a national debate over the right-to-die issue.

Other head-injury victims move into a related condition recently defined as a "minimally conscious state," in which they appear to intermittently have some awareness and ability to respond to stimuli, but their responsiveness is highly unpredictable and limited. Family members spend years at these patients' bedsides, hoping for signs of recognition or improvement, which occur very rarely.

Some researchers have been able to achieve some improvement in a few of these patients with drugs, including those used to treat Parkinson's disease, but their effectiveness has been very limited.

In the new approach, researchers at Cornell University's Weill Medical College in New York, the Cleveland Clinic in Ohio and the JFK Johnson Rehabilitation Institute in Edison, N.J., got Food and Drug Administration approval to try a technique known as deep-brain stimulation (DBS).

The technique, which has been shown to be effective for treating some patients with Parkinson's disease, severe pain, epilepsy, depression or obsessive-compulsive disorder, involves inserting tiny electrodes into the brain to stimulate specific regions.

Researchers have tried this technique on patients in vegetative states, including Schiavo, without success. The new experiment marks the first time it has been tried on a patient in a minimally conscious state.

In a presentation yesterday at a meeting of the Society for Neuroscience in Atlanta, the researchers said the case involved a 38-year-old man who had suffered a severe brain injury that left him in a minimally conscious state for six years, unable to communicate or function in

any consistent way. Brain scans, however, showed that many parts of his brain were still working.

After an intensive four-month evaluation to assess his capabilities, surgeons at the Cleveland Clinic implanted electrodes into parts of his brain known as the thalamus, believed to be involved in helping integrate the functions of other areas.

For the first six weeks after the procedure, before any stimulation began, the man's condition did not improve.

For the next five months, the researchers calibrated how much to stimulate his brain. Then, during a six-month trial period, the activation was turned on and off without those evaluating him knowing when it was on and when it was off.

The results of that test found significant improvement in the man's abilities to move, communicate and function, including his abilities to eat and respond verbally. While the researchers refused to elaborate on his improvement until their findings are published in a scientific journal, they reported that even when the stimulation is off, the patient continues to demonstrate improved "gestural and verbal communication abilities," which suggests that the stimulation may be having lasting effects on his brain.

"These findings provide the first evidence that DBS can promote significant late functional recovery from severe traumatic brain injury," the researchers wrote in their presentation.

The findings could fundamentally alter the way such patients are treated, the researchers said.

"Our observations years after the injury occurred challenge the existing practice of early treatment discontinuation for patients with only inconsistent interactive behaviors and motivate further research to develop therapeutic interventions," they wrote.

Although the findings are promising, the researchers stressed that they needed to be confirmed by studying additional patients.

"We need to do this in more subjects," said Nicholas D. Schiff of Cornell, one of the researchers. "The next step is to go forward with the current trial and do another case. We need to see where this goes."

Bernat called the results "fascinating" and "provocative," but he cautioned that more work was needed to see whether the approach would help others.

"When you present one case in which something seems to be beneficial, it always raises the question of whether this is typical or unusual," he said. "When you have only one case you don't know. But this certainly is encouraging."

Bernat noted that the approach was "fairly invasive" but that "if it turns out this does help, it certainly would constitute justification."

The researchers made a second presentation outlining the intensive process they went through to vet the ethical questions raised by the test and protect the patient's interests, including getting permission from a surrogate and several internal and external review boards.

"We tried to conceive of every conceivable safeguard," said Joseph J. Fins, a Cornell bioethicist involved in the study.

Other ethicists agreed.

"At a glance it looks like they've taken all the right steps," said Kenneth Goodman, a bioethicist at the University of Miami, after reviewing a summary of the presentation.